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Richer Than We Think: Why Canadians' Purchasing Power Is Up While Economic Growth Is Down

By Colin Busby

- Despite slowing economic growth as measured by the GDP, Canadian's real incomes and purchasing power have risen.
- The explanation? A positive shock in Canada's terms of trade, which has seen prices for many imports fall, and prices for exports rise.
- For policymakers, this militates against expansionist fiscal policy and loose monetary policy.

After 18 consecutive quarters of positive growth, Canada's real gross domestic product (GDP) recently fell by 0.1 percent over the previous quarter. Notwithstanding the negative turn, Canadians' real incomes are up and unemployment is at a modern-day low. Which indicators are most important in judging our economic performance, and in prescribing fiscal and monetary responses?

Low or negative GDP growth often triggers expansionist fiscal policy on the part of governments and loose monetary policy on the part of central banks. But GDP is not the only measure of our economic circumstances, and may send a muted signal when import and export prices change profoundly and quickly.

Because the market prices of the goods and services Canada exports have been rising rapidly, and the market prices of many of the items we import have been falling – a positive terms-of-trade shock – GDP is at present an understated measure of Canadians' buying power. Slowing GDP growth does not, at present, militate for expansionist fiscal policy – such as speeding up public infrastructure investment – or lower interest rate-setting from the Bank of Canada.[1]

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1 The July 15, 2008 Bank of Canada Interest Rate Announcement demonstrated the importance that terms of trade improvements and rising real income measures have on monetary policy rate decisions. As the Bank noted: "... commodity prices are continuing to outstrip earlier expectations. This has led to further increases in Canada's terms of trade and real national income, and has altered the outlook for global and domestic inflation." This *e-brief* should help clarify some of the logic behind its assessment.

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Why does GDP Fall Short?

Because Canada's small open economy has large trade flows relative to its size, our economic performance is closely tied to global markets. Dynamic influences readily work their way into prices. The world's growing appetite for energy, for example, has prompted a reorganization of our domestic economy: the loonie has appreciated, labour has migrated to Alberta and Saskatchewan, and pressure has mounted on our export firms to become more competitive.

Two important things have happened over the last decade: the global demand for oil and gas has sent energy export prices to historic highs, and the costs of Canada's imports have fallen, as reflected in machinery and equipment, electronics and other manufactured goods from abroad. The import-price decline is due in part to our appreciated currency (and a falling US dollar) and to imports of low-cost manufactures from countries such as China. Both factors increase Canada's purchasing power abroad.

With a falling relative price of imports, Canadians demand more foreign goods, other things being equal. Rising imports put downward pressure on measured GDP, because the value of imports is deducted in calculating GDP.

One way to account for terms-of-trade effects is to use "command GDP," an income measure that gives a rough approximation of the purchasing power increase generated by expensive exports and cheap imports (see Box 1 for the calculation). More often used in the US, command GDP is particularly useful for small open economies with high exposure to foreign trade, such as Finland, Ireland or Canada.

Box 1. "Command GDP: A Real Income Indicator"

Command GDP = real domestic demand + exports (export price deflator / import price deflator) – imports

Note: Price deflators capture the change in the value of exports or imports that is due a change in prices.
Source: OECD 2003, p. 37.

Before Canada's terms of trade began improving significantly in 2002, command GDP hovered slightly above or below the conventional GDP measure (Figure 1a).[2] Since 2002, the terms of trade shock has pushed command GDP well ahead of the conventional measure.

Not so in the United States, which has seen little variation between traditional and adjusted measures. This is mostly because trade is not as large relative to the size of the US economy, and the US is a net importer of petroleum, which means the US terms-of- trade impact is not as large as it is for Canada, nor is it positive.

Other measures help capture the terms-of-trade impact on our income. Canada's gross national product (GNP), or national income, divided by a price index for domestic purchases, captures income earned abroad, giving a better view of purchasing power than GDP.[3] As with command GDP, there is a distinct diversion between per capita real GDP and real national income, which is has grown faster in recent periods (Figure 1b).[4]

Do these national measures obscure important regional differences? To a degree, and there are clear differences in the terms of trade bearing on provinces with resources as opposed to those without (Table 1). But rising commodity prices and an appreciating dollar have increased the purchasing power of residents of most provinces (MacDonald 2007a).[5] Slow GDP growth in central provinces, for example, does not take into account the income gains from changes to relative prices – terms-of-trade improvements.

2 Based on figure in Roy (2004); revised with author's permission.

3 See Duguay (2006). Gross national product is the value added of *domestically* owned factors of production. GNP is calculated similarly to GDP, except it deducts the income of foreign owners of capital in Canada and adds the income of Canadian-owned capital abroad. This is important to Canada, because in recent years it has become a net exporter of capital.

4 See MacDonald (2007b, 2008) for other measures of gross domestic and gross national income.

5 For Ontario and Quebec, this is to some extent due to steady increases in non-energy commodity prices.

Figure 1a: Purchasing Power of GDP (2002 = 100).

Sources: Statistics Canada; US Department of Commerce; and author's calculations.

Note: Canadian data are calculated in 2002 Canadian dollars. US data are calculated in 2000 US dollars.

Figure 1b: Rising Real Income (GNP/Domestic Demand Index).

Sources: Statistics Canada; and author's calculations.

Table 1: Dynamically Changing Provincial Terms of Trade (1982 = 100)

Province	1982	1987	1992	1997	2002	2007
Nfld.	100.0	102.6	94.2	97.1	106.8	159.0
P.E.I.	100.0	103.4	104.8	102.0	109.3	103.4
NS.	100.0	104.4	104.9	103.7	102.5	109.4
NB.	100.0	104.4	103.4	108.6	104.4	108.9
Que.	100.0	111.1	113.7	115.2	113.3	119.6
Ont.	100.0	106.9	111.7	110.3	106.3	109.7
Man.	100.0	96.4	95.2	96.0	94.8	104.1
Sask.	100.0	79.3	76.0	81.3	83.8	109.3
Alta.	100.0	71.1	62.3	64.5	73.1	103.0
B.C.	100.0	103.8	104.3	112.2	107.9	122.8

Sources: Provincial Economic Accounts; CANSIM table no. 384-0036.

Large improvements in Canada's terms of trade drive up Canadians' real income – freeing up money to buy more cars, homes, foreign goods, and other domestic goods. This helps to explain our relatively steady housing markets and employment strength, amid slowing GDP growth.

The trouble with terms-of-trade improvements that are associated, in part, with resource prices, is that they may lack the permanence of long-term improvements in productivity. They keep prices low for the short term. However, energy prices' recent history has been erratic, and their future path is unknown, leaving a significant element of our economic well-being vulnerable to world events.

Changes to real GDP do give a snapshot of our economy, and GDP is still a key measure for monetary policy – changes to real growth contain important information. The imperative for fiscal and monetary policymakers is not to react too hastily to quarterly GDP data, as their message is sometimes mixed.

That said, this does not mean that governments should avoid implementing measures intended to improve productivity. Effective fiscal policy would see that provinces and Ottawa determine the proper mix of government spending expenditures, choose tax bases and set tax rates smartly. This will, in turn, provide a stable environment for firms and individuals to improve productivity. Beneficial fiscal measures would shift tax burdens on investment towards consumption through, for example, the harmonization of provincial taxes with the GST (Smart 2007, Dachis 2008).

Canada's recent economic history has been marked by large increases in export prices and a steady decline in import prices. GDP as conventionally measured understates Canadians' purchasing power on global markets, and policymakers ought bear this in mind when making macroeconomic policy choices.

References:

Dachis, Ben. 2008. "Slicing the Pie: Federal Assistance for Provincial Sales Tax Reform." C.D. Howe Institute e-brief. Toronto: C.D. Howe Institute. April.

Duguay, Pierre. 2006. "Productivity, terms of trade and economic adjustment." Remarks to the Canadian Association for Business Economics. Kingston, Ontario. August 28.

MacDonald, Ryan. 2007a. "Real GDP and the Purchasing Power of Provincial Output." Economic Analysis Research Paper Series. Statistics Canada Cat. no. 11F0027MIE – No. 046. July.

MacDonald, Ryan. 2007b. "Canadian and US Real Income Growth Pre and Post 2000: A Reversal of Fortunes." Economic Analysis Research Paper Series. Statistics Canada Cat. no. 11F0027MIE – No. 048. November.

MacDonald, Ryan. 2008. "Terms of Trade and Domestic Spending." *Canadian Economic Observer*. Statistics Canada Cat. no. 11-010-XPB. January.

OECD. 2003. "OECD Economic Surveys 2003-04: Switzerland." France: OECD.

Roy, Francine. 2004. "Terms of Trade, GDP and the Exchange Rate." *Canadian Economic Observer*. Statistics Canada Cat. no. 11-010-XPB. March.

Smart, Michael. 2007. "Lessons in Harmony: What Experience in the Atlantic Provinces Shows About the Benefits of a Harmonized Sales Tax." C.D. Howe Institute Commentary 253. Toronto.

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